

ABSTRACT

A premises based wireless network having a multi-segment wired network and a plurality of wireless access points connected to the wired network. The wired network operates according to a wired network protocol which may be the Internet Protocol. Wireless terminals communicate with the wireless access points according to a wireless network protocol, inconsistent with the wired network protocol. Each of the wireless terminals has a wired network address corresponding to one of the wireless access points. Each wireless terminal also has an address according to the wired network protocol. As the wireless terminals roam throughout the premises, protocol tunnels route communications between wireless terminals, thereby preserving communications while roaming by allowing the wireless terminals to retain their wired network addresses during the ongoing communications. The wireless terminals are connected to wireless access points. These wireless access points are in turn linked by data link tunnels to a root access point for a subnet. The data link tunnels enable the root access point for a subnet to forward data to the wireless access points. The forwarded data is not bridged onto the particular subnet that connects the wireless access point and the root access point for that subnet.